## What is claimed is:

5

10

1. A process for hydrodehalogenating halogenated meta-cresols of the formula (I)

$$R^4$$
 $R^3$ 
 $CH_3$ 
 $(I)$ 

in which the R<sup>1</sup> to R<sup>4</sup> radicals are each independently hydrogen or halogen, but at least one of these radicals is halogen,

characterized in that halogenated meta-cresols of the formula (I) are contacted with a catalyst which has been prepared by applying one or more salts of palladium and/or platinum and optionally copper salts to an aluminum oxide or titanium oxide support material, together with hydrogen, at temperatures between 100 and 250°C.

- 2. The process as claimed in claim 1, characterized in that halogenated metacresols of the formula (I) in which at least two of the R<sup>1</sup> to R<sup>4</sup> radicals are each chlorine are used.
- 3. The process as claimed in at least one of claims 1 and 2, characterized in that it is performed at 150 to 250°C.
  - 4. The process as claimed in at least one of claims 1 to 3, characterized in that from 0.5 to 50 mol of hydrogen are used per mole of halogen in the halogenated metacresol used.
- 5. The process as claimed in at least one of claims 1 to 4, characterized in that the hydrogen is used in a mixture with an inert gas.
  - 6. The process as claimed in at least one of claims 1 to 5, characterized in that the catalyst has been prepared by applying PdCl<sub>2</sub>, PtCl<sub>2</sub> and/or PtCl<sub>4</sub> to an aluminum oxide or titanium dioxide support material.

- 7. The process as claimed in at least one of claims 1 to 6, characterized in that the catalyst has been prepared by applying PdCl<sub>2</sub>, PtCl<sub>2</sub> and/or PtCl<sub>4</sub> to an aluminum oxide or titanium dioxide support material and additionally applying CuCl or CuCl<sub>2</sub>.
- 5 8. The process as claimed in at least one of claims 1 to 7, characterized in that the catalyst has been prepared by applying a total amount of from 0.5 to 100 g of one or more salts of palladium and/or platinum and optionally copper salts to one liter of aluminum oxide or titanium oxide support material.
- 9. The process as claimed in at least one of claims 1 to 8, characterized in that it is performed at pressures in the range from 1 to 5 bar and in the gas phase.
  - 10. The process as claimed in at least one of claims 1 to 9, characterized in that the product mixture present after the hydrodehalogenation reaction is subsequently sent to a chlorination reaction.